

REMARKS

Claims 9-15, 20, 23, 26, 28-30, 32, 33-36, 38 and 39-42 are currently pending. Claims 27, 31, and 37 have been canceled without prejudice or disclaimer. Claims 9, 11, 20, 23, 28, 29, 32-34, 38 and 39 have been amended. New claims 40-42 have been added herein. New Independent claim 41 clearly reads on elected Group I and Species B, which the Examiner previously identified as being “drawn to the substrate that is mounted on the mounting frame during the measuring of the shape of the optical surface and the processing of the optical surface.”

Restriction/Election Requirement of Previously Added Claims 27, 31 and 37

The Office has withdrawn claims 27, 31 and 37 that were added in the prior amendment as allegedly being directed to a non-elected invention. These claims have been canceled to expedite prosecution.

Objection to Claims 27, 31 and 37

The Office has objected to claims 27, 31 and 37 as allegedly being of improper dependent form. The objection is moot since these claims have been canceled.

Art Rejections

The Office Action includes a rejection of claims 9-15, 20, 23, 26, 28-30, 32, 33-36, 38 and 39 under 35 USC 102(e) as allegedly anticipated by Oshino (EP 1338911 A2). Insofar as Oshino is a European patent (not a US patent), the rejection is understood as being under 35 USC 102(a). This rejection is traversed.

Claim 9 has been amended and recites a method of manufacturing an optical component, the optical component comprising a substrate having an optical surface and a mounting frame for mounting the substrate. The method comprises assembling the optical component by mounting the substrate on the mounting frame, *the mounting frame comprising a support member and plural attachment members, the plural attachment members being connected to the support member at plural locations on the support member and separated from one another, the substrate being mounted to the mounting frame via the plural attachment members*. The method also comprises measuring a shape of the optical surface of the substrate, and *physically* processing the optical surface of the substrate *such that the*

optical surface is modified by said processing. The method requires that the substrate is mounted on the mounting frame *including the support member* during the measuring of the shape of the optical surface and the processing of the optical surface. The examiner's attention is directed to FIGS. 4 and 5 and paragraphs 0074 and 0075, for instance, of the present application for non-limiting examples of this subject matter.

The Office alleges that feature 25 of Oshino corresponds to the claimed mounting frame, but this alleged correspondence is incorrect particularly in light of the foregoing amendment to claim 9. Feature 25 of Oshino is described therein as a "holding device 25" that comprises "multiple 'anchoring members' 22 placed at respective locations around the perimeter of the optical element 20" wherein the optical element 20 has "respective mounting ears 24 . . . extending outward from the side surface of the optical element." (See, Oshino at paragraphs 36-37, and Fig. 2a.) In other words, the Office alleges that the collection of multiple anchoring members 22, referred to collectively as holding device 25 by Oshino, constitutes the claimed mounting frame.

However, the multiple anchoring members 22 (collectively, holding device 25) cannot correspond to the claim mounting frame at least because claim 9 now explicitly recites that the mounting frame comprises *a support member and plural attachment members, the plural attachment members being connected to the support member at plural locations on the support member* and separated from one another, the substrate being mounted to the mounting frame via the plural attachment members. Thus, the multiple anchoring members 22 of Oshino (collectively holding device 25) cannot satisfy the recitation of the claimed mounting frame, at least because the claimed mounting frame requires *a support member in addition to plural attachment members*, wherein the plural attachment members being connected to the support member at plural locations on the support member and separated from one another. Under the Office's rejection, the holding device 25 clearly lacks the claimed support member at the least.

If the Office were to allege that holding frame 40 of Oshino (Fig. 5) corresponds to the claimed support member, the rejection must fail because the holding frame 40 of Oshino does not satisfy the limitations of claim 9 requiring that the substrate be mounted on the mounting frame *including the support member during the measuring of the shape of the optical surface and the processing of the optical surface.* Rather, Oshino explicitly indicates that *different holding frames are used for different measuring tasks and processing tasks.* Moreover, Oshino *explicitly distinguishes the anchoring members 22* (collectively holding

device 25) upon which the Office relies *from Oshino's own holding frames*. For example, Oshino states:

A key aspect of the various embodiments discussed above is the detachability of the anchoring members from the holding frame (see FIG. 5). . . . [V]arious mirror-related tasks are required, such as mirror-shape measurements, mirror-polishing, wave-front measurements, etc. Each of these tasks typically requires that the mirror be held by a different holding frame. Col. 13, ll. 49-56. (Emphasis added.)

A representative “out of column” procedure is polishing The anchoring members (while remaining attached to the optical element) can be *mounted in another holding frame for polishing*. Col. 15, lines 10-20. (Emphasis added.)

Another exemplary “out of column” procedure that can be performed on the optical element is a coating procedure, in which coating is performed while the element is being *held (via the anchoring members) in a holding frame of the coating machine* such as a sputtering apparatus. Col. 15, lines 35-40. (Emphasis added.)

Thus, it is readily apparent from Oshino that the holding frames disclosed therein cannot correspond to the claimed support member, because the claimed support member remains part of the claimed mounting frame to which the substrate is mounted during both measuring and processing of the optical surface of the substrate. As noted above, Oshino does not use the same holding frame for both measuring and processing of the optical surface of the substrate. Accordingly, claim 9 is not anticipated by Oshino for at least these reasons.

Independent claims 20, 23 and 34 are distinguishable over Oshino at least for reasons similar to those set forth above since similar distinctions apply. Moreover, claim 23 has been further amended to recite that the support member has a ring shape, wherein the plural attachment members are separated from one another along a circumference associated with said ring shape, and it is abundantly clear that Oshino's anchoring members 22 (collectively holding device 25) cannot satisfy the combination of such a support member and plural attachment members.

Thus, independent claims 9, 20, 23 and 34 are not anticipated by Oshino for at least these reasons, and withdrawal of the rejection and allowance of these claims are respectfully requested. Claims 10-15, 28, 29, 35, 36, 38 and 39 are allowable at least by virtue of dependency.

The Office Action includes a rejection of claims 9, 10, and 13 (as best understood, since the rejection refers to “claims 9, 10 and 13-11”) under 35 USC 102(b) as allegedly anticipated by Le Saux (USP 5,581,347). This rejection is traversed.

The Office alleges that the processing disclosed in step 57 (Fig. 6) of Le Saux satisfies the claimed processing recited in claims 9, 10 and 13. As indicated at Le Saux col. 10, lines 7-11, the processing recited in that section is *processing of measurements done by a “computer means”* and has nothing whatsoever to do with any type of processing an optical element in addition to a measurement. Claim 9 has been amended to explicitly recite *physically* processing the optical surface of the substrate *such that the optical surface is modified by said processing*. Thus, claim 9 is clearly distinguishable over Le Saux since the asserted processing of Le Saux is not *physical* processing an optical surface of a substrate *such that the optical surface is modified by said processing*. Withdrawal of the rejection and allowance of these claims are requested for at least this reason. Independent claim 20, 23 and 34 are similarly distinguishable over Le Saux.

The Office Action includes a rejection of claim 16 under 35 USC 103(a) as allegedly unpatentable over either Oshino or Le Saux in view of Malyak (USP 6,515,750). This rejection is traversed insofar as the Office’s reliance on Malyak does not make up for the deficiencies of Oshino or Le Saux described above. Withdrawal of the rejection is requested.

For at least these reasons withdrawal of the above-noted rejections and allowance of claims 9-16, 20, 23, 26, 28-30, 32, 33-36, 38 and 39 are respectfully requested.

Comments at Page 4 of Office Action Regarding Claims 28, 32, 38, 29, 33 and 39

While the rejections of record have been addressed as noted above, additional comments are warranted in light of the lack of explanation by the Office regarding the rejection of claims 28, 32, 38, 29, 33 and 39. In particular, page 4 of the Office Action asserts:

As per claims 28, 32, and 38 the mounting frame is a ring shaped member as shown in Fig. 2(a).

As per claims 29, 33 and 39 the mounting frame comprises a continuous member to provide supporting the substrate at multiple locations as shown in Fig. 2(a).

It is respectfully submitted that the Office’s comments in this regard are insufficient to explain the rejection. Fig. 2(a) of Oshino simply shows an optical element 20 having mounting ears 24 with three anchoring members 22 attached to the mounting ears 24. The

Office alleges that the anchoring members 22 (collectively referred to as holding device 25) correspond to the mounting frame. What is it about the three anchoring members 22 in Fig. 2(a) that is ring shaped? Where in Fig. 2(a) is the alleged continuous member that provides support to the substrate at multiple locations? The collection of three anchoring members 22 clearly do not form a ring-shaped member nor is the collection of three anchoring members 22 continuous. Rather, the three anchoring members are entirely separate and clearly do not constitute a ring-shaped member. The Office has not met its burden in articulating a rejection of these claims. Should the Office seek to maintain these rejections, Applicants respectfully request a clear and detailed explanation from the Office as to what allegedly satisfies the recitations of these claims.

New Claims 40-42

New independent claim 41 recites a method of manufacturing an optical component, the optical component comprising a substrate and a mounting frame for mounting the substrate, the substrate having an optical surface. The method comprises mounting the substrate on the mounting frame such that a contact between the substrate and the mounting frame extends over a substantially continuous peripheral region near a periphery of the substrate, measuring a property of the substrate while the substrate is mounted on the mounting frame, and physically processing the optical surface of the substrate while the substrate is mounted on the mounting frame such that the optical surface is modified by said processing. Support for this claim may be found at least at paragraph 0027 of the present application, for example.

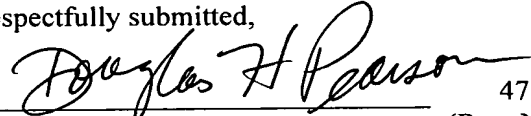
In contrast, the combination of applied references set forth by the Office does not disclose mounting a substrate on a mounting frame such that a contact between the substrate and the mounting frame extends over a substantially continuous peripheral region near a periphery of the substrate, in combination with the other claimed features. Thus, claim 41 is patentable over the applied references for at least this reason. claims 40 and 42 are allowable at least by virtue of dependency.

Conclusion

In light of the above, withdrawal of the rejections of record and allowance of this application are respectfully requested. Should there be any questions in connection with this application, the Examiner is invited to contact the undersigned at the number below.

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Respectfully submitted,



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